

**DOCKET NO. D-2004-28 CP-1**

**DELAWARE RIVER BASIN COMMISSION**

**Discharge to a Tributary of Special Protection Waters**

**New York City Department of Environmental Protection  
Phase I Improvements of Port Jervis Wastewater Treatment Plant  
City of Port Jervis, Orange County, New York**

**PROCEEDINGS**

This docket is issued in response to an application referred to the Commission by the New York City Department of Environmental Protection on August 4, 2004 for review of a proposed rehabilitation of an existing Wastewater Treatment plant (WWTP). The project was approved by the New York State Department of Environmental Conservation on \_\_\_\_\_, but it is withholding its Sewerage Permit \_\_\_\_\_ until the project is approved by the Delaware River Basin Commission (DRBC).

The application was reviewed for inclusion of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Orange County Planning Department has been notified of pending action. A public hearing on this project was held by the DRBC on October 27, 2004.

**DESCRIPTION**

**Purpose.** The purpose of the Phase I improvements to the Port Jervis Wastewater Treatment Plant (WWTP) (Phase I) is to replace existing antiquated Imhoff tanks with new primary sedimentation tanks, and sludge thickening tanks, sludge holding tanks and biofiltration for odor control facilities that have the capacity to process an maximum monthly average flow of 2.5 mgd.

**Location.** The WWTP is located at 4 Neversink Drive in Port Jervis City, Orange County, New York.

Treated effluent is discharged via a 24-inch diameter outfall into the Neversink River approximately 1 mile upstream from its confluence with the Delaware River. This section of the Delaware River is interstate water that has been designated by the DRBC as Special Protection Waters (SPW). The project outfall is found on the “Port Jervis, South” USGS Quad as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	41° 21' 44”	74° 40' 55”

The Port Jervis WWTP outfall is located in the drainage area of Interstate Special Protection Waters at River Mile 254.5 – 1.0, approximately 0.5 River Mile upstream from DRBC Water Quality Zone N1 on the Neversink River.

**Area served.** The WWTP serves only the City of Port Jervis, New York.

**Physical features.**

**Design criteria.** In 1946, the City of New York agreed to construct a WWTP to serve a population in the City of Port Jervis of not over 12,500 and industrial facilities in existence at the time. A WWTP with a design maximum monthly average flow of 2.5 mgd was constructed pursuant to the agreement, although the current SPDES Permit has limited flow to 5 mgd for many years. A design peak hourly flow of 6.5 mgd represents the peak hydraulic capacity of the existing plant, which is necessary to handle-daily variation in rate of inflow and wet weather-related surges. The existing plant provides solids screening, primary settling, biological treatment via trickling filters operating in series mode, final settling, chlorine disinfection, and sludge collection and removal.

The Phase I upgrade is needed to replace the antiquated Imhoff tanks with conventional primary sedimentation tanks and sludge processing units, as part of a two-phase improvement of the overall treatment plant. The facilities to be constructed will be designed to treat a maximum monthly average flow of 2.5 mgd, which corresponds to the historical maximum monthly flow rate. The two proposed primary sedimentation tanks are designed to be capable of handling the hydraulic load from the peak hourly flow of 6.5 mgd. The design criteria under Phase I is also in the framework of the existing SPDES permit.

**Facilities.** The existing plant remains basically as constructed in 1953, consisting of two influent/recycled wastewater mixing tanks, three Imhoff tanks, a fine-screen unit, a primary trickling filter, a secondary trickling filter, two final settling tanks, two chlorine contact tanks, and sludge drying beds. However, the sludge drying beds were temporarily removed from

service in 1985 and replaced with a centrifuge, which proved to be unreliable and was removed from service.

The sludge drying beds were permanently removed from service in the summer of 2001 due to safety issues of falling glass and failing wooden structural members. Liquid sludge, at 3-5% solids, is currently hauled off-site by a licensed hauler for disposal at a State-approved facility.

The use of liquid chlorine has been replaced with Sodium Hypochlorite.

The WWTP receives flow from three pumping stations and wet well grit removal is provided.

Under Phase I, the three Imhoff tanks will be demolished after completion of two primary sedimentation basins, the two sludge-thickening tanks and a sludge-holding tank. The two mixing tanks at the head of the plant will no longer be needed after the Imhoff tanks are replaced. The docket holder is also engaged in the development of the Phase II planning of the upgrade to the secondary facilities at the WWTP (Phase II). The other remaining treatment facilities will be kept operational until a Phase II upgrade project is constructed, which is also subject to DRBC approval. Only Phase I is approved under this docket.

**Other.** The potable water supply in the project service area is from the City of Port Jervis's intake on Sparrow Bush Creek at River Mile 257.0 – 4.8.

The tops of the proposed facilities will be designed to be above the 100-year flood elevation. Several of the remaining existing facilities would be adversely affected by the 100-year flood, therefore the Phase II improvements will need to remedy this condition.

Emergency power will be provided by a proposed 600 kVA backup generator.

The State Pollutant Discharge Elimination System (SPDES) Permit No. NY0026522 approved by NYSDEC in November 2001, includes final effluent limitations for the project discharge of 5 mgd to the Neversink River, which is classified by the NYSDEC as Class B surface waters. The following average monthly effluent limits are among those listed in the SPDES permit and meet or are more stringent than the effluent requirements of the DRBC\*.

PARAMETER	LIMIT
Flow	2.5 mgd
pH (Standard Units)	6 to 9 at all times

<b>PARAMETER</b>	<b>LIMIT</b>
Total Suspended Solids	30 mg/l (85% minimum removal)
Settleable Solids	0.3 ml/l (daily max.)
BOD (5-Day at 20° C)	30 mg/l (85% minimum removal)
Ammonia Nitrogen	* mg/l
Fecal Coliform	200 colonies per 100 ml as a geo. avg.
Chlorine, Total Residual	2.0 mg/l (daily max.)
Di-N-Octyl Phthalate	3.0 lb/day (daily max.)
Nickel, Total	3.7 lb/day (daily max.)
Zinc, Total	5.95 lb/day (daily max.)
Copper, Total	1.6 lb/day (daily max.)

\*NYSDEC plans to process an amendment to the existing SPDES permit to include Ammonia Nitrogen limits for the discharge. Upon the issuance of that amendment, the ammonia nitrogen limit will be a requirement of this docket. The docket holder is also engaged in the development of the Phase II planning of the upgrade to the secondary facilities at the WWTP and will conduct the analysis to determine the treatment levels necessary to meet the SPW requirements.

**Cost.** The overall cost of this project is estimated to be \$7,519,000.

**Relationship to the Comprehensive Plan.** The existing plant was included in the Comprehensive Plan by Resolution 62-14, Addendum # 1 on July 25, 1962. The Port Jervis WWTP is located approximately 1 River Mile upstream from the Delaware River—and just upstream from the Delaware Water Gap National Recreation~~al~~ Area, which was included in the Comprehensive Plan by Docket No. D-87-65 CP on October 28, 1987.

### **FINDINGS**

Pursuant to a 1941 Supreme Court Decree, the City of New York is responsible for the treatment of sewage and industrial wastewaters in the City of Port Jervis New York as long as diversions are made from the Delaware River and its tributaries. An agreement between the City of New York and the City of Port Jervis in 1946 resulted in the construction and operation of the wastewater conveyance and treatment system. The existing plant was constructed in 1953.

The Phase I improvement project at the existing, pre compact Port Jervis WWTP is a project having a substantial impact on the water resources of the Basin and is reviewable under Section 3.8 of the Delaware River Basin Commission (DRBC) Compact. The DRBC Rules of Practice and Procedure provide that an alteration to an existing facility will be deemed

reviewable unless the design capacity of the facility is less than a daily average of rate of 10,000 gallons per day (gpd) in the drainage area of SPW (Article 3 Section 2.3.5.A.4.).

In 1992, the DRBC adopted Special Protection Waters requirements, as part of the DRBC Water Quality Regulations (WQR), designed to protect existing high water quality in applicable areas of the Delaware River Basin. One hundred twenty miles of the Delaware River from Hancock, New York downstream to the Delaware Water Gap has been classified by the DRBC as SPW. This stretch includes the sections of the river federally designated as "Wild and Scenic" in 1978 -- the Upper Delaware Scenic and Recreational River and the Delaware Water Gap National Recreation Area -- as well as an eight-mile reach between Milrift and Milford, Pennsylvania which is not federally designated. The SPW regulations apply to this 120-mile stretch of the river and its drainage area.

The WQR include the SPW requirements designed to prevent degradation in streams and rivers considered to have "exceptionally high scenic, recreational, ecological or water supply values. The WQR numerically define existing water quality and establish Boundary and Interstate Control Points to detect any measurable change in water quality. SPW are classified as Outstanding Basin Waters (OBW) or Significant Resource Waters (SRW). The eight mile reach between Milrift and Milford is designated as Significant Resource Waters and the sections of the river federally designated as "Wild and Scenic" in 1978 -- the Upper Delaware Scenic and Recreational River and the Delaware Water Gap National Recreation Area are designated as Outstanding Basin Waters.

The WQR provide that "point and non-point sources of pollutants originating from outside the boundaries of SRW shall be treated as required and dispersed in the receiving water so that no measurable change occurs at Boundary and Interstate SPW Control Points". Compliance with the SPW requirements for existing wastewater treatment plants that discharge to intrastate tributary watershed is to be demonstrated at the time of SPDES renewal.

As indicated earlier in this docket, the Port Jervis WWTP effluent is discharged via an outfall located in the Neversink River, an intrastate tributary of an SRW. Therefore, the docket holder must make a demonstration of compliance with the SPW requirements contained in Section 3.10.3.A.f. of the WQR. The Phase I project is designed to replace aged Imhoff tanks. If these tanks were to fail, the resultant effluent could violate SPDES limits and threaten the water quality of the Neversink River and the Upper Delaware River SPW waters. Therefore, it is critical that the Phase I work be initiated and completed as soon as possible. Compliance with the SPW requirements of no measurable change at the Boundary and Interstate SPW Control Points, as well as, the rest of the SPW requirements will need to be demonstrated at the time of SPDES renewal. One of the SPW requirements, the no measurable change analysis, is being conducted as part of the Phase II study and the results used to develop the design and

construction improvements to the secondary treatment facilities. Condition II. g. of the Decision section of this docket requires reports to be submitted by the docket holder demonstrating its compliance with the SPW requirements of *Water Quality Regulations, Administrative Manual - Part III (October 23, 1996)*.

The nearest surface water intake of record for public water supply downstream of the project discharge is owned by Easton City, but the facility at River Mile 184.5 is reported to operate only on an emergency basis. However, the Bucks County Water and Sewer Authority operates a 30,000 gpd intake at River Mile 141, approximately 111 River Miles downstream.

The Port Jervis Stormwater Pollution Plan will be updated as part of the Phase II project and the Non-point Source Pollutant Control Plan will be addressed therein.

The limits in the SPDES Permit and in the Physical Features section of this docket are in compliance with Commission effluent quality requirements, but may need to be adjusted upon completion of the no measurable change analysis being conducted as part of the Phase II work.

When completed, the two phases of the project will produce an effluent discharge that meets the effluent and SPW requirements as set forth in the *Water Quality Regulations* of the DRBC.

Under the current Drought Management Plan for the Basin, the minimum low-flow required to be maintained at the Montague Gage (located approximately 9.2 River Miles downstream of the project discharge) is 1,100 cfs (710 mgd). The ratio of this low-flow to the design average flow of the Port Jervis STP is 284 to 1.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

### **DECISION**

I. Effective on the approval date for Docket No. D-2004-28 CP-1 below, the project and the appurtenant facilities described in the Section entitled, "Physical features" above shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in the Section entitled, "Physical features" above are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the NYSDEC, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission's.

b. The facility and operational records shall be available at all times for inspection by the DRBC.

c. The facility shall be operated at all times to comply with the requirements of the *Water Quality Regulations* of the DRBC.

d. If the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder must apply to the Commission for a docket revision in accordance with Section 3.8 of the *Compact*.

e. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

f. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

g. (i.) The docket holder will submit a water quality analysis to the Executive Director and the NYSDEC demonstrating that the docketed discharge from the Port Jervis WWTP does not cause a measurable change in the existing water quality in the classified interstate SPWs in accordance with the applicable SPW requirements of the Commission's Water Quality Regulations, Administrative Manual - Part III (October 23, 1996). By January 15, 2005, the docket holder will submit to the Executive Director and the NYSDEC a draft work plan necessary to perform the water quality analysis. Upon the receipt of the Executive Director's approval of the work plan the docket holder will conduct and submit to the DRBC and the NYSDEC the water quality analysis in accordance with the schedule in the DRBC approved work plan.

(ii.) The docket holder will submit a report to the Executive Director and the NYSDEC by June 30, 2005, addressing compliance with remaining applicable requirements of the SPW requirements of the Commission's *Water Quality Regulations, Administrative Manual - Part III (October 23, 1996)*.

(iii.) Reports submitted in accordance with (i.) and (ii.) above will include a schedule of the necessary actions, if any, to comply with SPW requirements.

h. The docket holder will apply for DRBC approval of the Phase II improvements at least 6 months in advance of the proposed request for bids for the construction of the Phase II improvements.

i. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams.

j. Within 10 days of the date that construction of the project has started, the docket holder shall notify the DRBC of the starting date and scheduled completion date.

k. Upon completion of construction of the approved project, the docket holder shall submit a statement to the DRBC, signed by the docket holder's engineer or other responsible agent, advising the Commission that the construction has been completed in compliance with the approved plans, giving the final construction cost of the approved project and the date the project is placed into operation.

l. This docket approval shall expire three years from date below unless prior thereto the docket holder has commenced operation of the subject project or has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

m. The area served by this project is limited to the service area as described above. Any expansion beyond this area is subject to review in accordance with Section 3.8 of the *Compact*.

n. Any requirements imposed by the National Pollutant Discharge Elimination System permitting agency shall supersede the requirements of this approval insofar as they impose more stringent treatment criteria.

o. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property. The docket holder shall assume all responsibility for any claims arising from the proposed discharges and shall indemnify and hold harmless the Commission against and from any and all claims made by or on behalf of any person arising from any discharges made by the docket holder.

p. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2). Enforcement of the standard is required to be carried out by the City of Port Jervis.

q. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

r. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the right to amend, alter or rescind any actions taken hereunder in order to insure proper control, use and management of the water resources of the Basin.

s. This docket approval shall expire on the expiration date indicated below unless the docket holder has submitted a complete application for renewal of this docket 12 months prior to the expiration date below, or permission has been granted by the DRBC for submission at a later date. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date, the terms and conditions of this docket will automatically continue and remain fully effective and enforceable pending the grant or denial of the application for docket approval.

t. The Executive Director may modify or suspend this approval, or require mitigating measures, pending additional review.

**BY THE COMMISSION**

**DATE APPROVED:**

**EXPIRATION DATE: October 27, 2009**